THE THIRTEENTH CONGRESSIONAL DISTRICT MEMBER.

John Y. Fulbright, Springfield, Greene county, Mo., was born in 1836 in Greene county, Missouri.

He was educated in the University of Arkansas, in Fayetteville, was a farmer's son, and has, since his maturity, been successfully engaged in diversified farming.

He owns a farm of four hundred acres, two hundred and fifty of which is cultivated in corn, wheat, oats and grass. In stock, mules and cattle have been his specialty.

Mr. Fulbright has never sought political preferment but his ability and integrity have commended him to the people of his district, who have repeatedly named him for important positions, but, as his party is largely in the minority in Greene county, he has received only the honor of the preference of his party.

THE FOURTEENTH CONGRESSIONAL DISTRICT MEMBER.

Dr. James C. McCown, Poplar Bluff, Butler county, Mo., was born in 1827 in Kentucky; was educated at Danville, Louisville and Lexington. He has farmed much after the methods in vogue in the State, following a diversified system that has comprised the growing of sheep, hogs, cattle and horses.

The Doctor says he has not been ambitious for wealth, being content with a comfortable living, but always desirous for the prosperity of the country and especially solicitous for the education of the people. He says: "An active tone of public morals, supported on a fair state of education among the masses, speaks more loudly in praise of the popular spirit of a community than does the unrestrained greed for wealth."

EX-OFFICIO MEMBERS.

David Rowland Francis. Governor, ex-officio member of the Board, was born in Madison county, Ky., October 1, 1850. He came to Missouri when fifteen years of age, and, after graduating from Washington University in 1870, entered the commercial world where he has been very successful. As Governor he took an active interest in the Board of Agriculture, recommending its reorganization in his annual message to the Thirty-sixth General Assembly. In making the appointments for the Board he, so far as possible, reappointed the old members, and his judgment in the selection of the members from other districts the people will commend.

The Governor is a member of the Executive Committee, and actively participates in the business of the Board.

L. E. Wolfe. State Superintendent of Public Schools, was born in Lewis county, Va., in 1852. He was reared on a farm with but meager educational advantages. At the close of the war he moved with his parents to Harrison county, Ky. In 1874 he came to Missouri and taught continuously up to his nomination and election to the office he now holds. He was principal of the Hopkins, Plattsburg, Nevada and Moberly schools, remaining at the latter place seven years.

In June, 1890, he was nominated by the State Democratic Convention for the office of State Superintendent of Public Schools and was elected the following November. In every enterprise he has undertaken he has thrown his entire energy, and has met with remarkable success.

Edward D. Porter, M. A., Ph. D., Dean of the College of Agriculture and Director of the Agricultural College Experiment Station of the University of Missouri, is a native of Vermont,—removed in early life to Michigan, and from there to Philadelphia. He received his primary education in the schools of New England, Michigan and Pennsylvania, and was graduated from the University of Pennsylvania and received from that institution his degrees of B. A. and M. A. Immediately after graduation he was appointed Professor of Natural Philosophy and Civil Engineering in Delaware College and was connected with that institution for thirty years, holding successively the chairs of Natural Philosophy, Civil Engineering, Mathematics, Astronomy and Agriculture, and was for thirteen years the Principal of its Preparatory Department.

This college, having been suspended during the Civil War, was reorganized by Dr. Porter in 1867, as an agricultural college, under the provisions of the Act of Congress of 1862. He remained in charge of the Department of Agriculture in that institution until 1880, when he resigned to accept the chair of Theoretical and Practical Agriculture in the University of Minnesota, which he held until 1889, when he accepted his present position.

His connection with the University of Minnesota was distinguished by his inauguration of the system of Farmers' Lecture Courses, and of Farmers' Institutes, educational agencies which have since become so popular throughout the country. He also established, in connection with the College of Agriculture, the "School of Agriculture," the first of its kind in the country, and an institution which is doing much to solve the problem of Agricultural education.

In addition to his work as an educator, Dr. Porter has held a number of other positions. He was Adjutant General of Delaware for eleven years, embracing the period of the Civil War,—was United States Pension Agent for five years, during President Grant's administration, and was Chief of Installation and Acting Commissioner for Minnesota at the New Orleans Cotton Centennial Exposition.

In authorship, Dr. Porter has been known by his various bulletins, reports, circulars and newspaper articles bearing upon Agriculture, among which may be mentioned, "Sorgho and Imphee Sugar Canes, their Value and Cultivation," Fourth and Fifth Biennial Reports of College of Agriculture of University of Minnesota, Bulletins 1 to 7 of the Minnesota Agricultural Experiment Station.

ELECTION OF STATE VETERINARIAN.

MOBERLY, Mo., August 11, 1891.

A meeting of the executive committee of the Board of Agriculture was held at Moberly, Mo., August 11, to act on the resignation of Dr. Paul Paquin, as State Veterinarian. Of the committee there were present J. A. Potts, President of the Board, Gov. D. R. Francis, A. Leonard and Alex. Maitland. Dr. Paquin's letter of resignation was read and accepted. The Secretary was instructed to express to the Doctor the Board's regret that family sickness and removal from the State compelled him to resign his place, their commendation of the satisfactory manner in which he has performed his official duties, and the hope of successful labors in whatever field he may be called.

It was then moved and carried that the committee proceed to elect a state veterinarian for the term beginning September 1 and ending with the next annual meeting of the Board in January, subject to the approval of the full Board.

It was also moved and carried that the election be conditioned on the person elected going at once to Columbia and associating himself with Dr. Paquin for the remainder of the month without compensation, in order to become familiar with the routine duties of the office.

Letters of application were then called for and read. Two were presented, from Dr. T. E. White, of Sedalia, and Dr. T. J. Turner, of Mexico.

After careful and extended consideration it was moved that the committee proceed to elect by ballot. The result of the vote was the election of Dr. Turner.

On motion the committee authorized the publication by the State Veterinarian of a circular regarding a disease prevailing in the State.

Adjourned. LEVI CHUBBUCK,
Secretary.

POPULAR FALLACIES CONCERNING DISEASE.

BY PAUL PAQUIN, M. D., V. M.

The world is full of erroneous ideas concerning the cause, cure and prevention of disease in man and beast, and, strange to say, we find thinking men, who direct in a large measure the destinies of the nations through the public press, who do a great deal of good in their wise sayings and teachings in various lines in which they are competent, assume to know much about diseases of the flesh and of vegetable life, and to give counsel to the world, and even to experts in this field, as to what they should do and how they should do it. It is one of the misfortunes of humanity that men useful in certain branches, who can benefit the human race in lines in which they are learned, and who have been successful in so doing, think themselves called upon to assume the *role* of wise counselors in matters of disease, even though they be ignorant of the first principles of physiology underlying life and health. It is curious for one who makes this a study to note the many absurdities advanced in the public press as scientific or practical facts worthy of the people's confidence, and the wholesale indorsement of absurdities by sensible men. Why one should assume, without knowledge of cause, to advise his fellow-men authoritatively and contrary to the teachings of those who have made the study of medicine their life work, and have searched the annals of centuries of medical investigation, is one of those anomalies in human nature which is found, sometimes, even in those in whom the strictest honesty attains. It is particularly so concerning animal diseases; everyone knows "a heap" about them and advises erroneously.

It is my purpose, in this article, to show some physiological laws which suggest what to do in certain kinds of maladies at least—my aim being to prepare the minds of the people, particularly live-stock owners, to prevent common-spreading diseases, and to suggest sensible means of eradication in cases of emergency.

In the first place, in the case of any spreading or so-called catching affection (whether directly contagious, infectious, or not), two facts should always be considered: *First.* That the animal body is, after all, but a mass of minute cells all joined together, each cell having life in itself, and that there exists in the world thousands of little beings composed of only one cell in which the activities of life are centered. The same thing is true of the vegetable world. *Second.* That specific diseases may always spread more or less one way or another among a number of individuals exposed to the same cause in certain circumstances, and are consequently termed spreading; they are due to parasites of a minute character, some of the one-cell beings.* These small parasites are termed bacteria, germs, microbes, etc.

The same law underlies the existence of all beings, viz., nutrition. Whether plants or animals, no matter how great or how small, the essential thing to life, after birth, is nourishment. Food, however, is not always found fit, in nature, to be assimilated, *i. e.*, to be appropriated by living bodies and serve in its natural condition for nutrition. Thus, a man eats bread, but this bread is composed of various things, and none of them in the solid state can be absorbed and reach the tissues of the body, the muscles and brain say, by means of the circulation of the blood without some alteration, making the bread somewhat liquid, absorbable and assimilable. For that purpose a substance is secreted in the mouth by certain glands, another in stomach by this organ, others in the intestines by different organs and these liquefy the bread. This is called digestion, and the secretions which produce the transformations are termed DIASTASES.

Large plants, though they extract their nourishment from the air and soil, also digest in a similar way at certain epochs. For instance, the sugar beet, at the period of flowering, utilizes and eats the very sugar it had stored away in its own roots and which had been in contact with water in the beet all along and yet remained inassimilable for nourishment. Why was this, and how was it? It is clear. The sugar was of a kind known as insoluble, and, being in this state, was insusceptible of absolute true solution; it had to be changed before becoming fit to nourish any part of the plant. At the period of flowering, however, when the plant needed so much nourishment to form its flowers, seeds, etc, it secreted a diastase which transformed the sugar and rendered it assimilable. Thus, there is at this period a true digestion by the beet. And this is not an exception, but an example of a form of digestion in plants similar to that of animals. We know, besides, that there exist carnivorous plants which digest live insects, etc.

Now, how do bacteria live? They, too, have to digest much of their food, and as some of them find the body of living man or the tissues of live animals fit for the nourishment they sometimes succeed in their invasions of these organisms and *digest portions of them for their nourishment.* This class of bacteria are parasites.

Those which seem to exist in their natural condition exclusively at the expense of living bodies are termed *obligate* parasites; those which live in the outside world under certain conditions and yet may feed also on living animal bodies may be termed *occasional* parasites.

As instances of *obligate* parasites among bacteria (or micro-organisms of the microscopic kind) may be mentioned the germs of glanders, consumption (tuberculosis), cow-pox, small-pox, the parasite of actinomycosis (big-jaw), etc. Among the occasional parasites we have the germs of black leg, charbon, typhoid fever, swine plague or hog cholera, chicken cholera, septicemia (so-called blood poison), yellow fever, the germs of pus in wounds and abscesses, the parasite of Texas fever, maleria, etc., all of which seem to have a period of existence and vegetation in the soil, polluted waters, decomposing vegetable and animal matters, and yet are *capable* of overcoming living animal bodies and eat them up in part.

Thus, it is evident, that the diseases of a specific character, such as those mentioned above, are due to life itself. Such a disease is the expression of the feeding process of countless millions of germs, each formed of only one cell, reproducing their like thousands of times a day and feeding upon a mass of individually living cells joined together to form the animal body. It is a real fight for existence between the parasites and the body cells among which there is a special army of soldiers—the white blood cells or corpuscles, which are scavengers floating in the blood and found loose here and there between the tissues.

* It is not my purpose here to speak of large parasites which produce disease also of a spreading character.

To be continued.

MAKE THE FARMERS' INSTITUTES MORE USEFUL.

HOW THE LOCAL PRESS OF MISSOURI AIDS AGRICULTURE.

[The following comment on the method of circulating information gathered by the State Board of Agriculture, by local newspaper supplements, is from the *American Agriculturist*, published in New York City. This method originated in the office of the Secretary of the Missouri Board of Agriculture, and, so far as we know, is confined to this office.]

The farmers' institutes of New York, Wisconsin, and other states, have been growing in interest remarkably of late years. This is because they have been found to be practical and helpful to the farmer. Wherever properly organized and well advertised the attendance at these meetings has been large, and the farmers have learned that the institute is organized in their behalf and is still untouched by the hand of the politician. So great is the interest in New York that as early as July the director of institutes had received fifty applications for meetings the coming winter, and the demand for them is such that a double set of meetings will have to be held to accommodate it.

Yet there are many farmers who do not or cannot attend the institutes. These are usually the least progressive farmers—men who do not subscribe for the agricultural papers, and whose reading is mostly confined to their local paper and political weekly. The only effective way to reach these and others is for the institute management to print a full report of each institute in the form of a single sheet supplement, to be furnished free of charge to the local papers in the surrounding counties. These supplements would disseminate the good work of the institutes as no annual report can do, and the expense would be but little more than the bulky annual reports which so few farmers now see.

The local country paper is read more carefully than almost any other publication by the people to whom it goes. This means of reaching the farmers who most need improvement should be carefully cultivated. No local publisher would object to employing so valuable a supplement. The usefulness of the local paper is not half appreciated by the community in which it is published. There is hardly a country editor who is not doing far more for his clientage than any other man in the town, usually with very moderate recompense. So patriotic a body of men as our country editors, with the mighty engine of the press at their command, can accomplish wonders for the education and improvement of their communities. They are ready and willing to do their part in the farmers' movement if they are provided with reasonable facilities for co-operating in the work.

This plan is adopted with excellent success by the Missouri State Board of Agriculture. Its monthly crop reports, information and news about the Agricultural College and Experiment Station, State weather service and special articles of interest to Missouri farmers, are all published in a convenient single-sheet supplement, which has a large circulation through the country newspapers.

Meteorological Report Missouri State Board of Agriculture.

(Co-operating with the U. S. Weather Bureau.)

AUGUST, 1891.

THE TEMPERATURE for August was below the normal for the State, excepting in Cape Girardeau, Cole, Dade, Laclede, LaFayette, Miller and Sullivan counties. The average of the mean daily temperature was 2° below the normal.

THE RAINFALL for the State was 2.66 inches above the normal, 3.26 inches, for the month. At but two points in the State was there a deficiency, 3.25 inches, at Austin, Cass county; 2.76 inches at St. Charles. The heaviest rainfall was reported from Steelville, Crawford county, 13.1 inches; 11.47 inches fell during the month at Carrollton; 10.5 inches at Chillicothe, and 8.22 inches at Glasgow.

PRESSURE (in inches). The monthly mean was 29.692; the highest, 30.30 on the 27th, at Kansas City; the lowest, 28.76 on the 2d, at St. Charles.

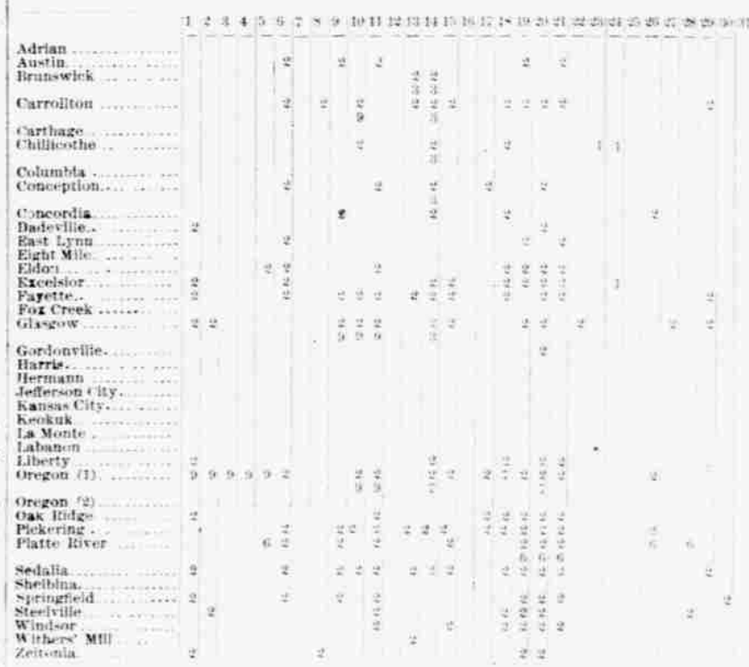
FROST occurred at Chillicothe on the 23d and 24th; and Excelsior Springs on the 24th.

TABULAR STATEMENT.

STATION.	TEMPERATURE. Maximum	Date	Minimum	Date	Mean	RAINFALL. Total	Days of	Humidity	OBSERVER.
Adrian	98.	10	30.	28	69.34	3.41	10		
Austin	98.	17	47.	23	73.96	3.25	5		Miss N. A. Webster.
Brunswick	95.	9	47.	28	68.47	7.9	5		Louis Benecke.
Cairo, Ill	92.	18	52.	24	74.4	4.77	8		S. L. Mosley.
Carrollton	94.	9	46.	23	71.3	11.47	10		Pettit & Welch.
(2)	98.	8	48.	23	61.	10.5	9		W. C. Wood.
Chillicothe (1)	88.5	8	60.	23	73.96	8.09	10		N. J. Swetland & Co.
Columbia	96.	7	42.	28	73.1	5.52	11	78.4	A. L. McRae.
Conception	89.	8	43.8	23	70.8	7.53	7	78.2	Fr. Paul, O. S. B.
Concordia	97.	9	68.	23	84.5	3.78	4		Henry Miller.
Dadeville	97.	18	58.	23	79.	4.89	7		Wick Morgan.
East Lynn	99.	18	48.	21	74.15	4.34	9		David Sharp.
Eight Mile	94.	16	46.5	21	72.32	4.25	9		J. H. Sharp.
Eldon	102	18	54.	23	76.31	8.06	9		S. Newton.
Excelsior Springs	95.	9	40.	24	70.63	6.33	10		A. Reinisch.
Fayette	96.	9	45.	28	74.4	5.83	11		T. Berry Smith.
Fox Creek	92.	9	58.	23	73.49				Wm. Muir.
Glasgow	95.	9	44.	28	72.2	8.22	9	73.7	C. N. Pritchett.
Gordonville	84.	17	60.	28	73.35	4.47	8		L. M. Bean.
Harris	94.	18	55.	24	78.09	5.78	8		H. J. Clevenger.
Hermann	94.	17	54.	29	74.9	7.7	13		S. W. Manshund.
Jefferson City	96.	9	48.	23	75.2	7.66	8		C. B. Lane.
Kansas City	95.	9	46.	24	73.5	6.25	8		P. Conner.
Keokuk, Iowa	95.	9	47.	28	71.1	6.10	14		F. Z. Gosewisch.
La Monte	95.	18	50.	28		8.19	6		W. D. Wade.
Lebanon	94.	17	48.	24	75.2	3.32	6		M. W. Serl.
Liberty	98.5	14	39.5	24	71.8	8.4	7		J. R. Eaton.
Oregon (1)	94.	8	44.	24	72.1	3.74	10	70.	Wm. Kaucher.
Oregon (2)	95.5	7	44.	23	70.84	3.62	10		S. M. Ruley.
Oak Ridge	98.	13	57.	25	78.35	5.4	6		H. Bruihl.
Pickering	88.	14	39.	24	64.5	4.62	12		M. B. W. Harman
Platte River	94.	9	38.	24	73.19	3.65	7		W. A. McDowell.
Sedalia	96.	18	47.	24	74.	4.26	12		Chas. G. Taylor.
Shelbina	....	....	....	....		3.6	6		Jno. S. Chandler.
Springfield	94.	18	44.	24	.....	4.23	8		
Steelville	94.	18	46.	25	73.	13.10			E. A. Pinnel.
St. Charles	94.5	10	47.5	28	73.6	2.76	11		Louis C. Saeger.
Windsor	94.2	18	45.1	24	73.27	5.11	10		G. W. Goodlett.
Withers' Mills						6.55	13		J. R. Dudley.
Zeitonia						4.87	5		A. Zeitinger.
State	102.		18	38.	24	73.1	5.94	8	75.

TABLE OF CASUAL PHENOMENA FOR AUGUST, 1891.

EXPLANATION.—In the following table the figures on the upper margin are the days of the month during which the different phenomena occurred, the place being given on the left margin. 1 indicates frost; 2, thunder storm; 3, hail; 4, sleet; 5, aurora; 6, solar halo; 7, lunar halo; 8, polar bands; 9, meteors.



A. L. McREA,
Observer Weather Bureau.

LEVI CHUBBUCK,
Secretary State Board of Agriculture.